Description of a New Genus of Carabideous Insects, by William MacLeay, Esq., Jun., M.L.A.

[Read 6th June, 1864.]

The very curious and minute insect, described below, was found by Mr. Masters and myself a few weeks ago near Wollongong, under stones in black moist soil close to the sea beach.

The position of the genus in the Animal Kingdom would be, according to Mr. MacLeay (Annul. Jav., Part I.), as follows :—

Subregnum ANNULOSA.
Classis MANDIBULATA.
Ordo COLEOPTERA.
Tribus CHILOPODOMORPHA.
Stirps GEODEPHAGA.
Familia HARPALIDÆ.
Genus ILLAPHANUS.

Descriptio generis :

Antennæ 11-articulatæ, articulo primo, secundo, ultimoque majusculis, 3^{tio} 4to subturbinatis, reliquis moniliformibus.

Labrum subquadratum setigerum.

Mandibulæ acutæ, arcuatæ, mandibula dextra, ad basin dentata.

Maxillæ lobo interno apice unguiculato, externo 2-articulato articulo ultimo gracili inflexo.

Palpi Maxillares 4-articulati, articulo primo elongato, secundo minimo, tertio obconico, ultimo tumido subtruncato appendice membranaceo.

Palpi Labiales 3-articulati, articulo secundo minuto, tertio tumido setigero.

Labium subquadratum.

Mentum medio subconvexo.

Caput magnum planum subquadratum, oculis nullis.

Thorax planus subcordatus angulis posticis rectis.

Corpus planum, apterum.

Pedes validi, femoribus medio incrassatis, tibiis anticis intus profundè emarginatis.

Species Illaphanus Stephensii. (Pl. XV.)

Testaceus nitidus, elytris obliquè sulcatis.

Long. $\frac{1}{2}$ lin., lat. $\frac{1}{7}$ lin.

Hab., Wollongong.

This is an exceedingly minute insect; its colour is pale testaceous.

The elytra have an oblique longitudinal stria or groove extending from the base near the suture to the outer angle of the apex. Five specimens of this very remarkable species were obtained in the locality indicated; they were all found adhering to the under sides of stones along the line of coal tramway which skirts the beach for some distance out of Wollongong; their extreme minuteness renders it, however, a very difficult matter to detect them, and it is only by patient examination that the collector is likely to be rewarded by a specimen of this very interesting insect.

I have named the species after my friend W. J. Stephens, Esq., M.A., the Treasurer of our Society.

The affinity of *Illaphanus* is clearly to the genera *Anillus* of Jacquel Duval; *Aëpus*, of Leach; and *Anopthalmus*, of Sturm. From the first of these genera (*Anillus*) to which it has the greatest affinity, *Illaphanus* differs in the head, which is large and broad; in the antennæ, which have the first four joints turbinate; in the labrum, which is without emargination; in the maxillary palpi, which have the last joint much swelled; in the labial palpi, which have the last joint turbinate;* in the mentum, which is without the medial tooth; and in the legs, which have the thighs flat and ovate, and the fore tibiæ with the emargination

* The long terminal seta of the labial palpi may answer to the last joint of those of *Anillus*, which is described by Jacquel Duval as being long, sharp, and slender. Taking this view of the matter, the labial palpi of the two genera would be very much alike.

long and near the middle. The only species of Anillus known (*A. cæus*) is found in the neighbourhood of Bordeaux and Toulouse, under stones in heaps of decomposed straw, it is described as very active in its movements.

From *Aëpus* our insect differs considerably, though in general appearance there is great resemblance. *Aëpus* has eyes, though they are very small and almost evanescent, while the trophi are described as resembling those of *Trechus;* indeed, *Aëpus* seems to be the link which connects *Trechus* and its affinities with the group of blind insects represented by the genera *Anopthalmus*, *Anillus*, and *Illaphanus*. *Aëpus fulvescens*, the only species known, is found under stones below high water mark on the coasts of England and France.

The affinity of *Anopthalmus* to *Illaphanus* is not very immediate, though one species, the *A. Raymondi*, from the caves of the Pyrenees approaches it in shape. The species of this genus, five in number, are all inhabitants of caves; three are from the caves of Carniola; one, as mentioned above, from the Pyrenees; and one from the mammoth cave, Kentucky.

There is another genus, which I have never seen, but which from the description is evidently in close affinity to the group we have been considering, I allude to the genus *Thalassobius* described by Solier in Gay's *Hist. de Chile*. The species *T. testaceus* is described as having the habit of *Aëpus* with the palpi of *Bembidium;* the eyes are almost obsolete.

One interesting circumstance connected with *Illaphanus* I have omitted to mention, viz., that it is the first instance of a blind animal being found in Australia. That it will not be the last I feel satisfied, for the caves in the mountain limestone formation, which have been found the common habitat of blind animals of all orders in other parts of the world, are nowhere more abundant or more extensive than in New South Wales.

I hope that before long an attempt will be made by the naturalists of our colony to have these caves thoroughly searched, not only for the animals at present inhabiting them, but for the remains of races of animals long since extinct.